December 12, 1966
MW-M-1603

Dear Dick:

In response to our 21 November technical discussion, concerning the ability to predictably control the convolution of transfer functions for a nonlinear photographic system, a study was conducted on the sensitometric behavior of original negative material in the GEMS simulation process. As stated in the enclosed report, the findings indicate that the density range of GEMS will not be suitable when employing a GEMS master obtained from a 2.3 gamma original negative.

The report also discloses that the best GEMS sensitometric simulation obtainable, by employing the existing simulation techniques, is achieved with the use of an original negative possessing a processing gamma of unity. The use of unity gamma negative material does not permit a truly realistic simulation of mission material because of certain deficiences. If unity gamma negative material is employed in the simulation process, a noticable GEMS contrast improvement would result; but such simulated material might not satisfy your ultimate photographic parameter requirements.

We feel that it is necessary to review the tonal simulation process as it applies to the system parameters and to recommend an appropriate course of action in the immediate future.

Sincerely,

Bill

Approved For Release 2002/06/17 : CIA-RDP78B04747A000700010011-2

STATINTL

MEMORANDUM FOR: [redacted]

STATINTL

interim report from [redacted]
on their MTF problems.

STATINTL

23 Dec
(DATE)

STATINTL

[redacted]

I've read the attached and reach the same conclusions that Bill T. reached.

We either need a new method or material which is originally rpocessed to a gamma of unity.

Guess it's back in your lap again. Maybe the Pseudo-GEMS is a way out for us.

STATINTL

[redacted]